Biomarkers in non-small cell lung cancer

Propositions accompanying the thesis

Biomarkers in non-small cell lung cancer
Imaging and Blood

Sara Carvalho

Maastricht, 30th June 2015

1. The underlying hypothesis of Radiomics is that advanced image analysis on conventional and novel medical imaging could capture additional information not currently used *(this thesis)*.
2. PET information has been shown to have higher prognostic value when extracted from metastatic lymph nodes in comparison to the primary tumour alone, further complementing that information *(this thesis)*.
3. "Delta-Radiomics" would provide a better identification of diversified response areas within tumour volume, and therefore have a great value for response monitoring *(this thesis)*.
4. Blood-biomarkers reflect dissimilarities of the tumour microenvironment, are linked to disease prognosis and response to treatment *(this thesis)*.
5. Whilst most (new PET) tracers have predominantly been used in the research environment, they offer exciting opportunities for improving staging, characterisation, stratification and response assessment in an era of increased personalised therapy in lung cancer *(Teresa Szyszko)*.
6. The identification of robust prognostic and predictive biomarkers would transform the ability to implement an individualised approach to radiotherapy. Importantly, functional imaging biomarkers hold the potential to evaluate tumour heterogeneity/biology both spatially and temporally *(Robin Prestwich).*
7. Tumour-specific genetic alterations in the serum or plasma are particularly valuable because they can provide temporal measurements of the total tumour burden as well as identify specific mutations that arise during therapy… (in an approach) termed 'liquid biopsy' *(Anna Buder).*
8. Collection and standardization of data will be stimulated to validate previously developed models which will also make it possible to update and improve those *(valorisation).*
9. Oh yes, the past can hurt… But, you can either run from it or learn from it! *(The Lion King)*
10. Até ao lavar dos cestos é vindima *(Portuguese saying)*.
11. Life is way too short not to enjoy every moment to its full extent!